

**REMARKS**

The present application was filed on April 12, 1999 with claims 1 through 19. In the Amendment and Response to Office Action dated March 20, 2003, claims 2, 3, and 11-14 were cancelled and new claims 20-33 were added. In the Amendment and Response to Office Action dated October 23, 2003, claims 26-29 were amended and affidavits under 37 CFR §1.131 were submitted. Claims 1, 4-10 and 15-33 are pending.

In the final Office Action, the Examiner asserted that the filed "affidavit" under 37 CFR §1.131 is ineffective to overcome Glass et al. (United States Patent Number 6,332,193, hereinafter "Glass"). The Examiner further rejected claims 1, 4-5, 9-10, and 15-33 under 35 U.S.C. §102(e) as being anticipated by Glass. The Examiner also indicated that claims 6-8 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

The present invention is directed to an integrated signal sensor with processing power to augment a challenge from a server and to compute a response to guarantee that the sensed signal is live and not stored. The sensor-processor computes the response to the augmented challenge based on the signal characteristics of the sensed signal and then transmits both the signal and the response. The host or the server can verify the response to authenticate liveness of the input image/signal and reject it if the response is different.

**Sufficiency of Affidavit Under 37 CFR §1.131**

In the final Office Action, the Examiner asserted that the "affidavit" under 37 CFR §1.131 is insufficient. In particular, the Examiner asserted the following (see page 2 of the final Office Action):

The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the Glass reference. While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v. Scudder*, 1897 C.D. 724, 71 O.G. 1417 (D.C. Cir. 1897). Unfortunately, the evidence does not provide any clear technical links to the invention disclosure and the application. The submitted evidence shows several meetings in which the inventors and the drafting attorney

discussed the invention disclosure YOR8-1998-0524, but does not show technical results, such as drawings or records, from the meeting. Therefore, the affidavit is deemed insufficient to overcome the reference.

For reasons given below; Applicants respectfully disagree. First, Applicants  
5 respectfully note that two affidavits under 37 CFR §1.131 were submitted: the first affidavit comprises an invention disclosure and the second affidavit comprises a number of email messages. Copies of the affidavits are enclosed.

37 CFR §1.131 allows an affidavit to be filed that establishes invention of the subject  
mater of the rejected claims prior to the effective date of the reference on which the rejection is  
10 based. The filing date of a U.S. patent is its effective date under 35 USC §102(e). See 37 CFR §1.131(a). The showing of facts in the affidavit shall be such as to establish conception of the invention prior to the effective date of the reference coupled with due diligence from prior to said date to the filing of the application. See 37 CFR §1.131(b).

Applicants respectfully submit that the affidavits establish (1) a conception of the  
15 invention prior to the date of the Glass reference; and (2) due diligence from said prior date to the filing of the application.

As to criterion (1), Glass was filed on January 19, 1999. In the first affidavit, the  
Applicants submitted invention disclosure YOR8-1998-0524 (called “the invention disclosure”  
herein), which was created on September 9, 1998, and last modified on September 30, 1998. The  
20 submitted invention disclosure states, in part, the following (see the paragraph spanning pages one  
and two of the invention disclosure):

The input sensor feeds the sensed image to an encoder built into the  
same package as the imager. The encoder might be included on the same silicon chip  
as the imager, as a separate chip in a multi-chip-module or hybrid, or as part of a chip  
25 stack. The encoder reads an external challenge from a server and generates a  
response based on part of the actual image acquired. The encoding function can  
optionally be tuned using internal configuration bits (EEPROM, ROM, RAM, laser  
trimming, etc). Because it uses parts of the actual image, the response is tightly tied  
to a particular image and hence its “liveness” can be guaranteed. A different  
30 challenge can be used for each transaction (the space is large and already-used values  
can be recorded to prevent regarding-use) so stored response have no counterfeiting  
value. Furthermore, because the only way to feed an image to the enoder [sic] is via

a channel within the same physical package, there is no way a stored image can be used to generate a valid response to a new challenge.

The invention disclosure also provides additional description that will not be repeated here. Applicants respectfully submit that the invention disclosure establishes conception of the claimed invention prior to the effective date of Glass.

As to criterion (2), the second affidavit comprises a number of emails between inventors and the managing attorney who later filed the present patent application. The emails show that a meeting occurred on October 30, 1998 to discuss the present invention, and additional emails are shown through April 7, 1999. These emails show that the inventors and the patent attorney were working toward revising the present invention for filing as a patent application. The present patent application was filed on April 12, 1999. The second affidavit evidences due diligence from October 30, 1998, which is prior to the effective date (January 18, 1999) of Glass, to the filing date of the present application.

Applicants respectfully submit that the affidavits establish conception of the invention prior to the effective date of the Glass reference coupled with due diligence from prior to the effective date of Glass to the filing of the application. Consequently, the affidavits remove Glass as a prior art reference.

Independent Claims 1, 15-17 and 20-22

The Examiner rejected claims 1, 4-5, 9-10, and 15-33 under 35 U.S.C. §102(e) as being anticipated by Glass. Regarding claim 1, the Examiner asserts that Glass meets the claim limitations in the above-referenced claims.

Applicants respectfully submit that the affidavits, copies of which are attached hereto, remove the Glass reference as prior art. Consequently, Applicants respectfully request withdrawal of the rejection of independent claims 1, 4-5, 9-10, and 15-33 under 35 U.S.C. §102(e) by Glass.

Applicants respectfully submit that independent claims 1, 4-5, 9-10, and 15-33 are patentable over the cited art.

Dependent Claims 4-10, 18-19 and 23-33

Dependent claims 4-5, 9-10, 18-19, and 23-33 were rejected under 35 U.S.C. §102(e)

as being anticipated by Glass.

Claims 4-10 and 23-25, claims 18-19 and 26-27, claims 28-29, claims 30-31, and 32-33 are dependent on claims 1, 17, 15, 20, and 21, respectively, and are therefore patentably distinguished over Glass because of their dependency from independent claims 1, 17, 15, 20, and 21, for the reasons set forth above, as well as other elements these claims add in combination to its respective base claim. The Examiner has already indicated that claims 6-8 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

Conclusion

All of the pending claims, i.e., claims 1, 4-10 and 15-33, are in condition for allowance and such favorable action is earnestly solicited. If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,



Robert J. Mauri  
Attorney for Applicant(s)  
Reg. No. 41,180  
Ryan, Mason & Lewis, LLP  
1300 Post Road, Suite 205  
Fairfield, CT 06824  
(203) 255-6560

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